

KOZHANOV, M.G.; RASHEVICH, A.Ya.; KAZAKOV, A.I.; KULAKOV, A.M.

Washing the regenerator checkerwork of large-capacity open-hearth furnaces. Metallurg 6 no. 1:17-18 Ja '61. (MIRA 14:1)

1. Magnitogorskiy metallurgicheskii kombinat.
(Open-hearth furnaces--Maintenance and repair)

VORONOV, F.D.; TRIFONOV, A.G.; KHUSID, S.Ye.; DIKSHEYN, Ye.I.; VAL'PITER, E.V.
SNEGIREV, Yu.B.; ANTIPIN, V.G.; Prinimali uchastiye: SMIRNOV, L.A.;
KAZAKOV, A.I.; YELIZAROV, A.G.; KULAKOV, A.M.; KOZHANOV, M.G.;
ZARZHITSKIY, Yu.A.; ARTAMONOV, M.P.; GOL'DENBERG, I.B.; ROMANOV,
V.M.; NOVIKOV, S.M.; MAYEVSKIY, A.B.; DMITRIYEV, I.; MANZHULA, M.;
HEREZOV, I.A.; ZUTS, K.A.; BADIN, S.N.; TATARINTSEV, G.;
MITROFANOV, N.G.; GAVRILOVA, K.M.; IVANOV, N.I.

Operating a 400-ton open-hearth furnace on casing-head gas.

Stal' 20 no. 7:594-598 J1 '60.

(MIRA 14:5)

(Open-hearth furnaces--Equipment and supplies)

VORNOV, F.D.; BIGEYEV, A.M.; DIKSHTEYN, Ye.I.; TRIFONOV, A.G.; KAZAKOV, A.I.; KOROLEV, A.I.; BORGIDIN, G.L.; ANTIPIN, V.G.; KULAKOV, A.M.; KOZHANOV, M.G.; GAZHUR, V.F.

Investigating the operation of 400-ton open-hearth furnaces following redesign. Stal' 22 no.10:904-907 0'62. (MIRA 14:10)

1. Magnitogorskiy metallurgicheskiy kombinat i Magnitogorskiy gorno-metallurgicheskiy institut.
(Open-hearth furnaces)

VORONOV, F.D., prof.; D'YAKONOV, A.I., kand.tekhn.nauk; DIKSHTEYN, Ye.I., inzh.;
TRIFONOV, A.G., inzh.; LORMAN, V.V., inzh.; KAZAKOV, A.I., inzh.; KOVALIK,
I.S., tekhnik.

Technological characteristics of Magnitogorsk Metallurgical Combine open-
hearth furnace operations using compressed air in the fuel spray. Stal'
23 no.12:1088-1091 D '63. (MIRA 17:2)

1. Magnitogorskiy metallurgicheskiy kombinat i Magnitogorskiy gorno-
metallurgicheskiy institut.

IIAKOV, L.A.; KAZAKOV, A.K.; SHPAYKHER, V.I.

Vacuum unit for light annealing. Mashinostroitel' no.3:34
Mr '63. (MIRA 16:4)

(Titanium alloys--Heat treatment)

KAZAKOV, A. M.

Min Higher Education USSR. Moscow Mining Inst imeni I. V. Stalin.

KAZAKOV, A. M. - "Investigation of the operation of the drive system of the E-509 universal excavator." Min Higher Education USSR. Moscow Mining Inst imeni I. V. Stalin. Moscow, 1956.
(Dissertation for the Degree of Candidate in Technical Sciences.)

SO: Kaizhnaya Letopis', No. 13, 1956

YAZAKOV, A.M., inzhener.

Water level conditions in the tailrace of hydroelectric power
stations. Rech.transp. 15 no.1:18-19 Ja '56. (MLRA 9:5)
(Hydroelectric power stations)

KAZAKOV, A.N., inzh.

Refloating vessels by means of water released from hydroelectric
power station reservoirs. Rech.transp. 16 no.9:20-22 S '57.

(MIRA 10:12)

(Rivers--Regulation)

3(7)

SOV/50-52-5-7/22

AUTHOR: Kazakov, A. M.

TITLE: Calculating the Characteristics of the Drain Wave (Raschet kharakteristik volny popuska)

PERIODICAL: Meteorologiya i gidrologiya, 1959, Nr 5, pp 37 - 39 (USSR)

ABSTRACT: The possibility of regulating the discharge of the river below the power station permits a number of production problems to be solved. Thus, artificial high tides can be produced in the critical points of time of low water. Such problems had already turned up in case of the River Kama, and they were solved by regulating the discharge from the Kama Power Station. At first, conditions had to be established which were suited to guarantee the demanded hydrological characteristics. An example is given here for such case where an artificial high tide was produced in September 1957. The Kama water basin had a rate of flow of only 450-600 m³/sec at that time. Thanks to the reserves of the power station, a daily rate of 800 m³/sec was delivered. In spite of this, a slow and steady decrease in the water level began on the section from the town of Perm' to the mouth of the River Belaya, i.e. 542 km. At that time, it became necessary to lift the water level for a short time at 450 km from the dam. The hypsometric station of Sarapul, 435 km from the dam, was chosen as

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Calculating the Characteristics of the Drain Wave

SGV/50-59-5-7/22

a basic point for calculations. There, the level had to be lifted by 40 cm. The deliberations for solving this problem are put forward here. A consumption of $1200 \text{ m}^3/\text{sec}$ was computed. On August 31, 1957, the Kama Power Station started the drain at $1200 \text{ m}^3/\text{sec}$. It lasted until September 2, 16 hours, when the consumption was reduced to $800 \text{ m}^3/\text{sec}$. The problem was solved. The difference between the calculated and the real values was only 4-6 cm. As had been anticipated, the maximum in Sarapul occurred on September 6. There are 1 figure and 1 table.

Card 2/2

KAZAKOV, A.M., inzh.

Determining the level stages in the continuous-flow zone of
the tailrace of the Perm Hydroelectric Station. Rech.transp.
18 no.1:34-36 Ja '59. (MIRA 12:2)

1. Kamskoye basseynovoye upravleniye puti.
(Hydraulics) (Perm Hydroelectric Power Station)

KAZAKOV, A.N., inzh.

Reconstruction of the Moskva River lock system; from Pererva to
the mouth of the river. Gor. khoz. Mosk. 74 no.9:2-25 S '60.
(MIRA 13:9)

(Moskva River--Locks (Hydraulic engineering))

5(4), 10(7)

AUTHORS: Kogarko, S. M., Skobelkin, V. I., Kazakov, A. R. SOV/20-122-6-25/49

TITLE: The Interaction Between Shock Waves and the Front of a Flame
(Vzaimodeystviye udarnykh voln s frontom plameni)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 6, pp 1046-1048
(USSR)

ABSTRACT: The present paper investigates the intensification of shock waves in their interaction with the front of a flame by variation of the normal combustion process in the shock wave. The length of the shock wave is assumed to be sufficient in the direction of the reaction zone. For the interaction between such a shock wave and the flame front the following applies: 1) The shock wave is transformed at the flame front (like on the boundary dividing two media). In this way a refracted and a reflected wave are formed. The flame front can by approximation be considered to be a contact-discontinuity. The expressions for the refraction coefficient are written down. 2) When passing through the flame front the shock wave compresses the gas in the reaction zone, whereby temperature rises. This temperature rise increases reaction velocity, so

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SOV/20-122-65/49

The Interaction Between Shock Waves and the Front of a Flame

that the propagation velocity of the flame is also increased. This propagation velocity increases very rapidly, and therefore this process may be looked upon as a sort of explosion in the gas current behind the shock wave; it causes the formation of 2 additional (intensifying) shock waves. The shock wave front moves with subsonic velocity in relation to the disturbed gas, and therefore any kind of disturbance is able to catch up with this front in the current behind the shock front, thus changing its structure. The propagation velocity of the flame is not increased immediately upon arrival of the shock wave, but only after a certain relaxation time. The latter is of the same order of magnitude as the duration of reaction. A diagram schematically shows the intensification of the shock wave when passing through the flame front. Expressions for shock front calculation are given. The new propagation velocity of the flame is calculated according to the theory developed by Zel'dovich. The amplitude of the intensifying shock wave depends upon the amplitude of the initial shock wave as well as on the kinetic properties (reaction velocity, calorific value, activation energy, etc.) of the fuel. The second diagram shows the amplitude of the inten-

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SOV/20-122-6-25/49

The Interaction Between Shock Waves and the Front of a Flame

sifying shock wave of compression in the reaction zone for 2 different propagation velocities. There are 2 figures and 5 Soviet references.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR
(Institute for Chemical Physics of the Academy of Sciences,
USSR)

PRESENTED: June 21, 1958, by V. N. Kondrat'yev, Academician

SUBMITTED: June 11, 1958

Card 3/3

KIZAKOV, A.N.

Geographical names of the Lovoxero tundra on the Kola Peninsula.
Uch.zap.Len.um. no.124:297-313 '49. (MIRA 9:6)
(Lovoxero Tundra) Names, Geographical

KALAKOV, A.N.

Names, Geographical - Murmansk Province

Characteristics and distribution of Lapp geographical names in the Murmansk Province, Izv. Vses. geog. obshch., 84, No. 4, 1952.

Monthly List of Russian Accessions, Library of Congress, October 1952, Unclassified.

KAZAKOV, A. N.

"Petrology of the Intrusives of the Northwestern Part of the Mansk
Granite Field." Cand Geol-Min Sci, Leningrad State U, Leningrad, 1954.
(IZhGeol, No 1, 1955)

Survey of Scientific and Technical Dissertations Defended at USSR Higher
Educational Institutions (12)
SO: Sam. No. 556, 24 Jun 55

KATAKOV, A.N.

Prevalence of positive microclines. Zap.Vses.min.ob-va 85 no.3:
433-434 '56. (MLRA 9:11)
(Microcline)

KAZAKOV, A.N.

VELIKOSLAVINSKIY, D.A.; KAZAKOV, A.N.; LOBACH-ZHUCHENKO, S.B.; MANUYLOVA, M.M.

Geology of the northeastern part of the Northern Baikal Highland.
Trudy lab. geol. dokem. no.7:120-230 '57. (MIRA 11:3)
(Northern Baikal Highland--Geology)

KAZAKOV, A.N.; SOKOLOV, Yu.M.

Geology of the Orkolikan series overburdening lower Proterozoic
formations in the central part of the Northern Baikal Highland.
Trudy Lab. geol. dokem. no.7:231-245 '57. (MIRA 11:3)
(Northern Baikal Highland—Rocks, Sedimentary)

KAZAKOV, A.N.

Pseudoconglomerates of the Mama complex (Northern Baikal Highland).
Trudy Lab.geol dokem. no.9:336-356 '59. (MIRA 13:11)
(Mama Valley--Conglomerate)

KAZAKOV, A.N.

Structure of the Mama formation (Northern Baikal Highland). Trudy
Izb. geol. dokem. no.11:43-52 '60. (MIRA 14:1)
(Northern Baikal Highland—Geology)

V.I. ICHSLAVINSKIY, D.A.; KAZAKOV, A.N.; GERLING, E.K.

Age of geological formations in the Northern Baikal Highland.
Trudy Lab.geol. dokov. no.12:281-290 '61. (MIRA 14:11)
(Northern Baikal Highland—Geological time)

VILENSKIY, A.N.; KAVAGIN, G.I.; KRAVCHUKA, L.I.; STANISLAV, G.D.;
FAZAKOV, A.N., red.

[Ictrology of trap intrusions on the right bank of the
lower reaches of the Yenisey River] Ictrologiya trupper-
vykh intruzii pravoberezh'ia nizhnego techenia Eniseia.
Moskva, Nauka, 1964. 236 p. (MIRA 17:9)

KARAKOV, A.N.

Microstructural orientation of olivine in the rocks of the
supposedly upper mantle. Zap.Vses.min.ob-va 94 no.5:576-
580 1965. (MIRA 18:121)

1. Deystvitel'nyy chlen Vsesoyuznogo mineralogicheskogo
obshchestva, Laboratoriya geologii detskembriya AN SSSR,
Leningrad.

MAZAKOV, A. P.

Skorostnye metody obrabotki flota [Accelerated methods of servicing the
fleet]. Moskva, Rechiizdat, 1952. 27 p.

SO: Monthly List of Russian Accessions, vol. 6 No. 11 February 1954

~~KAZAKOV~~, Anatoliy Pavlovich; YEL'MEYEV, V.Ya., otv.red.; KORNEYEV,
M.Ya., red.; VODOLAGINA, S.D., tekhn.red.

[Production of material wealth is the basic source of social
development] Material'noe proizvodstvo - osnova obshchestvennogo
razvitiia. Sost. A.P.Kazakov. Leningrad, 1957. 25 p.

(MIRA 12:8)

1. Leningrad. Universitet. Otdel zaachnogo obucheniya. Kafedra
dialekticheskogo materializma.

(Economics)

YEL'MEYEV, V.Ya., prepodavatel'; IVANOV-OMSKIY, I.I., prepodavatel'; KAZAKOV, A.P., prepodavatel'; NOVOZHILOVA, L.I., prepodavatel'; DROZDOV, A.V., prepodavatel'; KORNEYEV, M.Ya., prepodavatel'; BELYKH, A.K., prepodavatel'; YADOV, V.A., prepodavatel'; ROZHIN, V.P., prof., otv. red.; MIKHLIN, Ye.I., red.; VODOLAGINA, S.D., tekhn. red.

[Base and superstructure of a socialist society] Bazis i nadstroika sotsialisticheskogo obshchestva. Leningrad, Izd-vo Leningr. univ., 1961. 168 p. (MIRA 14:9)

1. Leningrad. Universitet. 2. Filosofskiy fakul'tet Leningradskogo gosudarstvennogo universiteta (for all except Rozhin, Mikhlin, Vodolagina)

(Economics)

SUKOLENOV, Aleksandr Yevdokimovich, kand. tekhn. nauk; MARFENIN, N.V., inzh. retsenzent; KAZAKOV, A.P., dots., kand. tekhn. nauk, retsenzent; RZHECHITSKIY, B.D., inzh., red.; MAKRUSHINA, A.N., red. izd-va; RIDNAYA, I.V., tekhn. red.

[Mechanization and organization of cargo-handling operations]
Mekhanizatsiya i organizatsiya gruzovykh rabot. Moskva, Izd-vo
"Rachnoi transport," 1963. 431 p. (MIRA 16:5)

1. Zaveduyushchiy kafedroy "Organizatsiya i mekhanizatsiya peregruzochnykh rabot" Gor'kovskogo instituta inzhenerov vodnogo transporta (for Kazakov).

(Cargo handling—Equipment and supplies)
(Inland water transportation—Management)

VAL'KOV, Grigoriy Petrovich. Prinimali uchastiye: KAZAKOV, A.P.,
kand. tekhn. nauk, dots.; GNOYAN, A.A., inzh.; MOROZOV,
N.P., inzh.; ARTAMONYCHEV, A.N., kand. tekhn. nauk,
retsenzent; MARFENIN, N.V., inzh., retsenzent; RZHECHITSKIY,
B.D., red.; MAKRUSHINA, A.N., red.

[Organization of cargo handling; problems and examples] Orga-
nizatsiia gruzovykh rabot; zadachi i primery. Moskva,
Transport, 1965. 299 p. (MIRA 18:6)

KAZAKOV, A.P., dotsent, kand. tekhn. nauk

Substantiation of the economic expediency of establishing
cement storage centers in large transport terminals. Trudy
GIIVT no.49:3-17 '63. (MIRA 18:6)

KAZAKOV, A.P. (Moskva); REIZAYEV, A.I. (Moskva); VIGDEROVICH, V.N. (Moskva)

Refining magnesium by zone melting. Izv. AN SSSR. Met. no. 4:72-76
SI-Ag '65. (MIRA 18:8)

L 01797-66 ENT(m)/ENT(t)/ENT(b) IJP(c) JD

ACCESSION NR: AP5021496

UR/0370/65/000/004/0092/0096
669.2/8.43

AUTHOR: Kazakov, A. P. (Moscow); Belyayev, A. I. (Moscow); Vigdorovich, V. N. (Moscow) 25
94.55 44.55 44.55

TITLE Purification of magnesium by zone refining 11 10

SOURCE: AN SSSR. Izvestiya. Metally, no. 4, 1965, 92-96

TOPIC TAGS: magnesium, metal zone refining, metal purification

ABSTRACT: Highly pure magnesium is needed more and more in atomic power engineering, semiconductor technology and other branches of science and technology. The authors examine the behavior of impurities in magnesium during purification by the zone refining method. The distribution factors for impurities in magnesium are briefly analyzed theoretically. The distribution of aluminum, copper, silicon and iron impurities in magnesium is studied experimentally. The zone refining was done at rates of 0.22, 0.35, 0.70 and 1.05 mm/min. The experimental setup is shown in fig. 1 of the Enclosure. The effective distribution factor of the impurities was studied as a function of the rate of motion of the melted zone (f) after various

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L 01797-66

ACCESSION NR: AP5021496

numbers of passes (n). The results of this study are given in table 1 of the Enclosure. Orig. art. has: 5 figures, 2 tables.

ASSOCIATION: none

SUBMITTED: 01Dec64

ENCL: 02

SUB CODE: MM

NO REF SOV: 002

OTHER: 010

Card 2/4

L 01797-66

ACCESSION NR: AP5021496

ENCLOSURE: 01

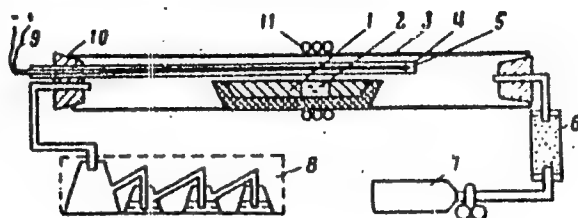


Fig. 1. Diagram of the experimental setup for zone refining of magnesium:
1--ingot; 2--melted zone; 3--quartz tube; 4--protective cover for the thermocouple;
5--thermocouple; 6--drier with silicagel; 7--tank with sulfur dioxide; 8--filter
system; 9--thermocouple; 10--stopper; 11--heater

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L 01797-66

ENCLOSURE: 02

ACCESSION NR: AP5021496

TABLE 1

Effect of the rate of motion of the melted zone on the distribution of Al, Si and Cu impurities in magnesium after zone refining with various numbers of passes

f, mm/min	n	Impurity content $\times 10^4$ in various sections along the magnesium sample in mm.														
		Al					Si					Cu				
		10	45	80	115	150	10	45	80	115	150	10	45	80	115	150
0.22	2	25	25	30	35	51	<8	<8	<8	<8	10	2.0	4.8	6	7	110
	3	25	22	22	27	58	<8	<8	<8	9	10	<0.8	1.5	1.5	2.5	0.97
0.35	2	20	30	30	34	40	<8	<8	<8	24	100	2	5	9	21	132
	3	25	23	25	28	48	<8	<8	<8	84	84	<0.8	1.0	2	9	170
0.70	2	36	41	38	38	49	<8	10	19	22	64	15	35	33	50	110
	3	32	34	35	38	58	<8	<8	9	14	92	9	10	10	25	110
	4	30	34	31	38	60	<8	<8	8	11	87	1.1	2	4	9.1	150
1.05	3	37	34	37	40	48	10	21	30	39	120	5	20	32	71	110
	4	33	34	34	37	45	8	10	10	28	145	2	8	19	00	170

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L 28399-66 EWT(m)/EWA(d)/EWP(t)/ETI IJP(c) JD/HW/WB/ND
 ACC NR. AT6013792 SOURCE CODE: UR/0000/65/000/000/0123/0135
 AUTHOR: Mirulyubov, Ye. N. (Candidate of chemical sciences); Kozakov, A. P.
Kurtepov, A. P.
 ORG: none
 TITLE: Effect of chlorides on the corrosion resistance of stainless steels in nitric acid solutions
 SOURCE: Korroziya metallov i splavov (Corrosion of metals and alloys), no. 2. Moscow, Izd-vo Metallurgiya, 1965, 123-135
 TOPIC TAGS: chromium steel, nickel steel, stainless steel, corrosion resistance, nitric acid, test method/1Kh18N9T stainless Cr-Ni steel
 ABSTRACT: Various corrosion tests were performed, each suited to the test objective: measurement of corrosion potentials as a function of time, and of corrosion as a function of the potential of the steel, with the aid of a hydrogen reference electrode. The potential measurements were based on the scheme: x mol HNO₃/KNO₃ (sat.)/KCl(sat), Hg₂Cl₂/Hg, with the chlorine ions being added to the solution in the form of NaCl. Findings: the addition of Cl⁻ ions to HNO₃ solutions causes the potential of stainless steels to shift from a passive state, characterized by a high corrosion resistance, to an active state at which their corrosion rate increases by several orders of magnitude. After some time, however, the corrosion process ceases and the steel returns to passive state. In this connection, the corrosion rate of stainless
 Cord 1/2

L 28399-66

ACC NR: AT60113792

steels is greatly affected by the test method. For example, it was established that, all other conditions remaining equal, the corrosion rate of 1Kh18N9T steel at 20°C increases with increasing ratio of the volume V of 3M H₂SO₄ solution (containing 10 g/liter NaCl) to the surface S of the specimens of this steel (length of experiments 20 hr); thus, for a V/S ratio (cm³/cm²) of 3.7 the corrosion rate K is 3.8 g/(m²-hr), whereas for V/S = 70, K = 24.4 g/(m²-hr). Corrosion rate also varies with time; thus, for 1Kh18N9T steel in 3M HNO₃ with 10 g/liter NaCl at 20°C and V/S = 7.5, K = 12.3 g/(m²-hr) when test time τ = 1 hr, but K = 24.2 g/(m²-hr) when τ = 4 hr and K = 2.9 g/(m²-hr) when τ = 46 hr, and for $\tau > 46$ hr the steel ultimately returns to passive state. Corrosion rate tends to increase with increasing V/S ratio as well as with decreasing distance from surface of specimen to surface of solution. Thus, when evaluating the effect of various factors on the corrosion rate of stainless steels in HNO₃ solutions with Cl⁻ ions, allowance must be made for the features of the test method selected, preferably selecting a test method that simulates best the presumed operating conditions. Generally, for stainless steels in HNO₃ solutions with chlorides in active state, the corrosion rate increases with increasing temperature and mixing rate of the solution and decreasing Ni content of the steel, and passes through a maximum when the concentrations of the acid and chloride and the Cr content of the steel are increased. Orig. art. has: 9 figures and 4 tables.

SUB CODE: 07,11 SUB. DATE: 19Jul65/ ORIG REF: 012/ OTH REF: 003

Cord 2/2

ACC NR: AP7002862

SOURCE CODE: UR/0149/66/000/006/0079/0085

AUTHORS: Kazakov, A. P.; Belyayev, A. I.; Vigdorovich, V. N.

ORG: Moscow Institute for Steel and Alloys, Department of Manufacture of Pure Metals and Semiconductor Materials (Moskovskiy institut stali i splavov. Kafedra proizvodstva chistyykh metallov i poluprovodnikovyykh materialov)

TITLE: Investigation of conditions for zone recrystallization of magnesium

SOURCE: IVUZ. Tsvetnaya metallurgiya, no. 6, 1966, 79-85

TOPIC TAGS: magnesium, copper, aluminum, silicon, metal recrystallization, metal purification, metal zone refining

ABSTRACT: The conditions for zone recrystallization of magnesium were studied, supplementing the results of A. P. Kazakov, A. I. Belyayev, and V. N. Vigdorovich (Izv. AN SSSR, Metally, No. 4, 92, 1965). The experimental procedure followed is described by V. Dzh. Pfann (Zonnaya plavka. Metallurgizdat, 1960). The dependence of the effective distribution coefficients of Al, Cu, and Si impurities in zone-refined Mg was studied as a function of the recrystallization rate. The experimental results are presented in graphs and tables (see Fig. 1). The following relationship between the effective distribution coefficient K and the crystallization rate f was observed

$$\lg \left(\frac{1}{K_{Al} - 1} \right) = 0,61 f + 0,363,$$

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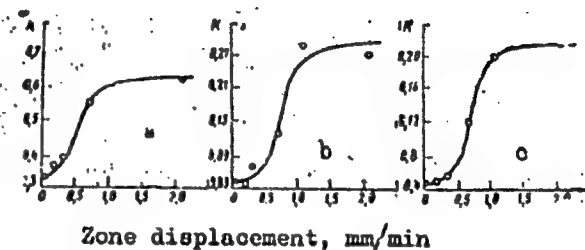
UDC: 669.721

ACC NR: AF7002862

$$\lg \left(\frac{1}{\kappa_{Si} - 1} \right) = 0,977 f + 1,457,$$

$$\lg \left(\frac{1}{\kappa_{Cu} - 1} \right) = 0,801 f + 1,403.$$

Fig. 1. Dependence of effective distribution coefficients of Al (a), Si (b), and Cu (c) impurities in Mg on the zone displacement rate. The three points shown in the graph correspond to the experimental data of A. S. Yue and I. B. Clark (Trans AIME, v. 211, No. 6, 881, 1958)



The concentration dependence of the effective distribution coefficients of Al, Cu, and Si impurities was studied in the concentration range of 10^{-1} to $10^{-3}\%$, and the experimental results are tabulated. The rate of corrosion of zone-refined Mg was compared with that of distilled Mg. It was found that zone-refined Mg was identical in its corrosion behavior, with respect to HCl and KCl solutions, with that of fractionally distilled Mg. The experimental results are shown graphically. On the basis of the experimental results and literature data, a scheme is proposed for the classification of the effect of impurities on the purity of zone-refined Mg. Orig. art. has: 2 tables, 6 graphs, and 5 equations.

Card 2/2 SUB CODE: 11/ SUBM DATE: 08Oct65/ ORIG REF: 005/ OTH REF: 002

L 29912-66 EWP(k)/EWT(m)/I/EWP(v)/EWP(t)/ETI IJP(c) JD/HM/HW

ACC NR: AF5027747

SOURCE CODE: UR/0137/65/000/008/E048/E048

AUTHOR: Kazakov, A. R.

TITLE: Peculiarities of the feeding sources for radio-frequency welding of thin-walled straight-seamed pipes.

SOURCE: Ref. zh. Metallurgiya, Abs. 8E337

REF SOURCE: Tr. Vses. n.-1. in-ta tokov vysokoy chastoty, vyp. 5, 1964, 51-65

TOPIC TAGS: welding technology, metal tube, generator, rectification, automatic electric device

ABSTRACT: For radio-frequency welding it is necessary to have special tube generators. In using generators for welding pipes made of Al, Ti, and other hard to weld metals, it is necessary to have a filter which would lower the frequency amplitude of the variable constituent of the rectified voltage to 1%; in welding low-carbon and low-alloy steels - to 4%. In addition to the existing protective devices of the relay and signalization it is best to arrange protection for the rectifiers, generator tube and the signalization indicating the irregularities in automation and control circuit, as well as the flash back. The relays must be quick-acting. M. Frolova

SUB CODE: 13 SUBM DATE: none

Cord 1/1 (1/2)

UDC: 621.791.77:621.774.2

GLEIKH, Yu.Ye., inzh.; LAKERNIK, R.M., inzh.; KAZAKOV, A.R., inzh.;
LUNIN, I.V., inzh.

Characteristics of radio-frequency welding of the aluminum
covering of cables. Svar: proizv. no.8:20-22 Ag '63.
(MIRA 17:1)

1. Zavod "Moskabel'" (for Lakernik). 2. Nauchno-issledovatel'-
skiy institut tokov vysokoy chastoty (for Lunin).

842 1100, A.S.

SOV/136-58-5-5/22

AUTHORS: Bykhovskiy, Yu.A. and Polyakova, V.V., Bagdasarov, V.A., Kazakov, A.S. and Sarkisyan, A.M.

TITLE: Converter Automation, Utilisation of Converter Gases and Application of a Spectroscope Method for Controlling the Bessemerisation Process (Avtomatizatsiya konverterov, ispol'zovaniye konverternykh gazov i primeneniye spektral'nogo metoda kontrolya protsessa Bessemerovaniya)

PERIODICAL: Tsvetnyye Metally, 1958³, Nr 5, pp 28 - 34 (USSR)

ABSTRACT: At the Alaverdi Copper-chemical Combine, the productivity of converter operation and of the sulphuric-acid plant and converter campaign life were increased in 1957 by introducing automatic control and rapid analytical methods. The authors hope their description of the methods and their development will be useful to other combines. In addition to the authors, the following participated in the work: from the Alaverdi Combine - Sakhanskiy, Zarapov, Bezhanov, Arutyunyan, Davtyan, Kortava, Feofanov, Tumanyan and other; from Gintsvetmet - Rodionova, Kuznetsov and Olevanov; from the TsPKB of the Proyektmontazhavtomatika (now Giprotsvetmet) - Rozender, Averbukh and Finger; from Kavtopokontrol - Dzodtsoyev, Kapysitskiy and Vishnevskiy. The authors

Card1/3

SCV/136-58-5-5/22

Converter Automation, Utilisation of Converter Gases and Application of a Spectroscope Method for Controlling the Bessemerisation Process

describe first the automation of converters with details of the instruments and a circuit diagram (Figure 1). The component parts of the system are units for automatic regulation of gas pressure in the dust-catcher for automatic control of blast flow rate and pressure, for protecting tuyeres from filling with liquid metal in the event of blast pressure falling below the safe value, for continuous temperature measurement in the converter (Figure 2) and a series of alarm signals. The spectroscopic analytical method adopted was developed after a special investigation in which the continuous flame spectrum was photographed and also studied visually. For determining the readiness of white matte, a pocket spectroscope is now used, the method being based on the appearance of two narrow lines (in the region 5400 and 5700 Å). For controlling the end of the bessemerisation process, the relation between the SO_2 content of the exit gases and the state of the process is used, observations being made with a steeloscope. The results

Card2/3

sov/136-58-5-5/22

Converter Automation, Utilisation of Converter Gases and Application of a Spectroscope Method for Controlling the Bessemerisation Process

in 1957 of the adoption of automation of the combine were a 5-6% increase in converter heat weight, 7-8% decrease in duration, a converter campaign life increase up to 5 1/2 from 3 months, increase in sulphur-dioxide concentration to 6-8% and savings of materials and power; production of elementary sulphur also increased and the overall productivity of the converter shop rose by 15%.

There are 4 figures and 2 Soviet references.

ASSOCIATIONS: Gintsvetmet and Alaverdi medno-khimicheskiy kombinat (Alaverdskiy Copper-chemical Combine)

Card 3/3

1. Furnaces--Control systems
2. Waste gases--Applications
3. Sulfuric acid--Production
4. Steel--Production
5. Spectrophotometers--Applications

KOSTIN, S.A., inzh.; KIRICHENKO, A.V., inzh.; KAZAKOV, A.T., inzh.

Laboratory studies of using compressed air in dewatering coal
middlings which have already been coagulated. Nauch. trudy
KuzNIIUgleobog. no.1:33-45 '62. (MIRA 16:8)
(Filters and filtration)

SITNIKOV, I.Ye.; KAZAKOV, A.T.

Efficiency of detonators. Gor.zhur. no.3:39-41 Mr '60.
(Detonators) (Blasting) (MIRA 14:5)

KAZAKOV, Aleksey Tikhonovich; GLOTOV, O.K., red.; USHAKOVA, A.F., ved.
red.; POLOSTINA, A.S., tekhn. red.

[Blasting methods and techniques in seismic prospecting] Metodika
i tekhnika vzryvnykh rabot pri seismorazvedke. Moskva, Gos.
nauchno-tekhn. izd-vo neft. i gorno-toplivnoi lit-ry, 1961. 217 p.
(MIRA 14:12)

(Seismic prospecting) (Blasting)

KOSTIN, S.A., inzh.; KAZAKOV, A.T., inzh.; KIRICHENKO, D.I., inzh.

Using polyacrylamide in laboratory and industrial studies on
settling sludge and clarifying backwater at the Kirov preparation
plant. Nauch. trudy KuzNIIUgleobog. no.1:62-72 '62. (MIRA 16:8)
(Kuznetsk Basin—Coal preparation) (Acrylamide)

AM1016113

BOOK EXPLOITATION

S/

Kazakov, Aleksey Tikhonovich

Methods and techniques of blasting operations in seismic prospecting (Metodika i tekhnika vzyvanykh rabot pri seysmorazvedke), 2d ed., rev. and enl., Moscow, Gostoptekhnizdat, 1963, 282 p., illus., biblio., 3,240 copies printed.

TOPIC TAGS: blasting, seismic prospecting, explosive, tetryl, trotyl, ammonite, hexogen, explosive storage, explosive transportation, boring, drill URB-2A, drill SBUD-150, drill UShB-16, drill URB-13, geophysics, geology

PURPOSE AND COVERAGE: This book gives brief information on seismic prospecting, geological strata and minerals, self-propelled drills, and methods of boring explosive charge pits. There is a detailed discussion of the fundamentals of the theory of explosives, the properties of explosives used in seismic prospecting, and the principles of setting an explosives charge. The general rules for blasting operations and the equipment used are described. The personnel required in blasting operations are outlined. There is a detailed presentation of the methods and techniques of blasting operations, blasting operations in natural water basins, the features of blasting operations on various surfaces and in the winter, blasting

Card 1/1

AM1016113

operations under complex meteorological conditions and at night. The methods and techniques are described considering the methodology of seismic observation, the quality of the seismogram, and the need to conserve resources. With respect to the conditions and requirements of seismic prospecting there is a detailed treatment of: the organization, conduct of blasting operations, short-time storage of explosives, transportation and use of explosives. The book gives attention to the basic rules of safety arising from the theory and practice of blasting in seismic prospecting considering the "Uniform Rules of Safety in Blasting Operations". The book is intended for specialists of the geophysical organizations conducting blasting operations and is a practical guide for seismic prospecting expeditions and parties. It can also serve as a text for preparing qualified cadres of blasters and blasting foremen in seismic prospecting.

TABLE OF CONTENTS [abridged]:

Introduction - - 3
Ch. I. Brief information on seismic prospecting - - 5
Ch. II. Strata and minerals - - 13
Ch. III. Boring explosives pits - - 23

Card 2/5

44338

S/024/62/000/006/006/020
E140/E135

AUTHOR: Kazakov, I.Ye. (Moscow)
TITLE: On the statistical theory of continuous self-adjusting systems

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye
tekhnicheskikh nauk. Energetika i avtomatika, no.6,
1962, 76-81

TEXT: The author studies the gradient type of self-adjusting continuous system, in a variant previously studied by M. Margolis and C.T. Leondes (A parameter tracking servo for control systems, Trans. IRE, AC-4, no.2, 1959), in which probing or test steps are not required. The method requires prior knowledge of the structures of the process and of the control system. It is shown in the paper that although the auxiliary operators of the system are determined by the process and system and should ideally be altered at each change of parameters of the latter, in practice they can be given arbitrarily in a wide range without adverse effect on the system dynamics. There is 1 figure.

Card 1/1

SUBMITTED: May 23, 1962

S/138/62/000/012/007/010
A051/A126

AUTHORS: Gamburg, D. Yu., Kazakov, A. V., Lelyakina, T. M., Belugina, L. N.,
Vesselovskiy, K. B.

TITLE: Investigation of carbon black produced by electro-cracking of
natural gas to acetylene

PERIODICAL: Kauchuk i rezina, no. 12, 1962, 22 - 24

TEXT: Samples of acetylene carbon blacks, obtained from dry collection and produced in one of the electro-cracking plants, were studied in 1959 - 1960 by the ГИАН (GIAP - State Institute of Scientific Research and Design of the Nitrogen Industry and Products of Organic Synthesis), in cooperation with НИИРП (NIIRP - Scientific Research Institute of the Rubber Industry). Investigations were conducted to determine the possible use of these samples as fillers in rubber mixes. The major disadvantages of the investigated carbon blacks were found to be: the high volumetric numbers, elevated ash content and a low density which in some cases not exceeded 40 - 50 g/l. Work has been carried out to increase the density by 3 to 4 times and reduce the volumetric number from 34

Card 1/2

Investigation of carbon black...

S/138/62/000/012/007/010
A051/A126

to 5.9 cm³/g. The ash content could also be reduced by regulating the production process through gas annealing with vapour condensate. Finally, the elevated content of volatile substances could also be reduced with an increase in annealing temperature. The advantages of the methane electro-cracking carbon black are: the high tensile strength, hardness according to TM-2 (TM-2), increased tear resistance exceeding the standard acetylene carbon black in this respect. It was experimentally established that with the properly adjusted carbon-black production process from gases of methane electro-cracking, carbon black compression, and its granulation, a stable product is formed which is not inferior to standard acetylene carbon black [П-1250 (P-1250)], and carbon black from methane electro-cracking produced at present in the GFR. The investigated carbon black gives the same properties to the rubber mixes as the latter two. There are 2 tables. ✓

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy proyektnyy institut azotnoy promyshlennosti i produktov organicheskogo sinteza i Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti (State Institute of Scientific Research and Design of the Nitrogen Industry and Products of Organic Synthesis and Scientific Research Institute of the Rubber Industry)

Card 2/2

1ST AND 2ND ORDERS										PROCESSES AND PROPERTIES INDEX										3RD AND 4TH ORDERS									
<p><i>co</i></p> <p>The phosphate resources of the U. S. S. R. A. V. KAZAKOV <i>Izvestia i Urozhai</i> (Fertilizers and Yields) 1920, 21 4. The five year plan ("pyatiletka") requires the production of 2.7 million tons of superphosphate ($11\% P_2O_5$) and 3.5 million tons of phosphates which are equal to 2.1 million tons of superphosphate. The total amt. of phosphate deposits in the European part of the U. S. S. R. has been calculated to be 15,830 million tons. The main supply (88%) is located in 6 deposits. The location of these and the amounts of the other deposits are given. <i>Ibid</i> 101 p. Data are given on the various sources of phosphate deposits in the U. S. S. R. Their value is detd. and methods of exploitation are given. To enrich mechanically some of the phosphates the flotation process was adopted successfully. <i>Ibid</i> 131-161 Detailed data are given on the phosphate resources in the Kazakhstan territory, their geology and compn.</p> <p style="text-align: right;">J. S. JORRE</p>																													
<p>ASB-51.4 METALLURGICAL LITERATURE CLASSIFICATION</p>																													

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PROCESS AND PROPERTIES INDEX
1ST AND 2ND COLUMNS

A review of the exploitable resources of phosphate deposits in U. S. S. R. A. V.
KALAKOV. (*Sobremennye i Budushie (Fertilizers and Crops)*) J. 244 (3) (1931).--The data
on the phosphate deposits and possible mining in the western part of European Russia
are analyzed. In general the phosphates are of low P₂O₅ content, 15-18%. J. & J.

COMMON ELEMENTS

MATERIALS INDEX

ASSOCIATED METALLURGICAL LITERATURE CLASSIFICATION

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ca 18

1 The enrichment and grinding of phosphorites. I. P. V. Lavshenko and A. V. Kazakov, Editors. *Trans. Sci. Inst. Ferrous* (U.S.S.R.) No. 122, 1-254 (in German 257 (1933)).—In part I, the primary enrichment of phosphorites by mech. means, giving the tech. processes and describing the ores of the various sections of the U. S. S. R., are given in the following papers: A. V. Kazakov and M. A. Fomin, 7-17; M. A. Fomin, 17-22, 80-100, 106-113, 122-126, 126-134; F. N. Belash, 23-35, 35-41, 113-122; N. S. Ul'yanov, 42-45, 45-48, 49-54, 55-57, 70-74, 103-104; V. M. Vidomov, 57-61, 61-70; H. F. Pimenov, 113-115. In part II, the secondary enrichment of phosphorites by the processes of grinding and flotation is discussed. A method of sep. the high Fe-bearing phosphorites by magnetism is given. These topics are presented in the following papers: M. A. Fomin, 135-49; V. P. Kotsarevich, 149-54; F. N. Belash, 154-65, 165-71, 172-81, 181-90, 190-96. In part III the theory and practice of grinding phosphorites, giving the results of lab. expts. which lead to semi-com. and com. schemes for enriching the product in P_2O_5 , is presented by L. M. Chernull, 199-254. J. R. Joffe

850 514 METALLURGICAL LITERATURE CLASSIFICATION

Processes and Properties

Methods of thermal analysis. A. V. Kuzakov and K. I. Andrianov. *Akad. V. I. Vernadskomu i Pyslideniya. Nauch. Deyatelnost* 2, 833-68 (1930); *Chem. Zvestr.* 10, 1, 2305-6.—Heating curves for various minerals obtained by the ordinary method of thermal analysis vary widely from case to case for one and the same mineral and are not reproducible. It is recommended that heating curves be obtained by the technique of repeated heating. The repeated heating is done after cooling the app. but with the same sample and without any change in the arrangement of app. In this way all external factors are excluded and the curves obtained represent the true thermal behavior of the substance being investigated.
M. G. Moore

Chemical nature of the phosphate substances of phosphorites and their genesis. A. A. Kozlov. *Tran. Sov. Inst. Fertilizers, Inorganic Fertilizers*, No. 130, 3, 73, 1957, *Revised* 19, 1957, at 1: 33, 1160.

Phosphorites result from purely chem. precip. of phosphorus and dissolved in sea water. To test this hypothesis, equim. in the system $\text{CaO}-\text{P}_2\text{O}_5-\text{H}_2\text{O}$ in low concn. fields was studied. The precip. obtained were studied by crystal optical, chem., structural, thermal and x-ray methods.

I. I. Scheraga

430 314 DETAILED LITERATURE CLASSIFICATION

ॐ नमो भगवते वासुदेवाय

147185 • 1

The thermal properties and the solubility of minerals
A. V. Kasanov. *Trudy 2 Sovetsk. Ekip. Mineralog.*
Petr. 1937, 120-35; Khim. Referat. Zhur. 1, No. 8, 5,
(1938).—The isotherm consts. of the linear-radial solv.
velocity in HCl at 20 and 30° were detd. for Vol'skil,
Vyatskil and Podolskil phosphorites, Khibin F-apatite,
Bakal'skil siderite and magnetite, Kloperskil limonite,
and Chiragidzorskil pyrite and hematite. Max. solv.
velocity was found for the Vol'skil and Vyatskil phos-
phorites (5140 and 3000 g./hr.), and min. solv. for pyrite
(traces in the soln.). The minerals mentioned were also
burned at 1200-1400° to det. their differential thermo-
grams, the disson. curves of H₂O, CO₂ and SO₂, and the
solv. curves at 20° in 1 N H₂SO₄. The results are sum-
marized by: "The max. solv. velocity of the substance
occurs at the moment of the thermal breakdown of the
crystalline lattice of the mineral and of the mol. rearrange-
ments into new solid phases." In case of H₂SO₄, even
the highly pyritized phosphorites require a low-temp. about
burning (not above 700°), and the glaucinite phosphorites
require a high-temp. burning (about 800°). For phos-
phorites rich in carbonate apatite a high-temp. burning
(1200-1300°) increases their solv. considerably.

W. R. Henn

KAZAKOV, A.

Phosphorite layers and the genesis of natural phosphates. *Soviet Geol.* 8, No. 6, 43-47 (1938). K. considers phosphorite deposits as of marine origin and discusses the conditions of temp. and of chem. compn. of the sea water necessary for their formation and their varying PO_4^{3-} and P_2O_5 contents and their degrees of basicity. P. H. Rathmann

ASB-514 METALLURGICAL LITERATURE CLASSIFICATION

Lithology and the processes of weathering of the phosphate seams of the Egor'yevsk group of deposits A. V.

Karakov. *Trudy. Ser. I. Fertilizers. Izvestiya Akademii Nauk SSSR* No. 140, 1958 (in English, 1959, 1968).
K. traces the phosphate deposits transformations during 2 stages of weathering. In the first stage CaCO_3 is lost and the Ca phosphate is gradually dissolved and removed. SiO_2 is displaced by phosphate; gel-like deposits of green "neoglaucinite" form. In the second stage of weathering which takes place in a situation above the ground waters, disintegration of glauconite, neoglaucinite, idrite and pyrite with the formation of limonite, hematite and opal is observed. P, Ca and the alkali metal are removed by the percolating waters.

ASD 31.6 METALLURGICAL LITERATURE CLASSIFICATION

PROCESS AND PROPERTIES INDEX	
CA	8
<p>Phosphorite facies 1. The origin of phosphorites and the geological factors for the formation of deposits. A. V. Kazakov. <i>Trans. Sci. Inst. Fertilizers Insectofungicides</i> (U. S. S. R.) 1939, No. 145, 1-108; <i>Khim. Referat. Zhur.</i> 1940, No. 1, 35 R. -K. advances a theory for the formation of phosphorites which are regarded by him as chem. deposits formed in the region of Continental shelves and discusses the facts and observations on which he bases his hypothesis. (1) According to a no. of investigators the phosphate substance of all platform and geosynclinal phosphorites consists in the main of the highly dispersed fluorapatite, $3\text{Ca}_5(\text{PO}_4)_3\text{CaF}_2$, with admixts. of the highly dispersed thinly distributed calcite. (2) For the detn. of the physicochem. conditions for the deposition of fluorapatite from the soln. K. describes his investigations of the equil. systems $\text{CaO-P}_2\text{O}_5\text{-H}_2\text{O}$ and $\text{CaO-P}_2\text{O}_5\text{-HF-H}_2\text{O}$. However, this phase of the investigation does not prove sufficiently the hypothesis because the positions of the</p>	<p>fields of stability of the single solid phases are not detd. definitely and the equil. concns. of CaO, P_2O_5 and F, which correspond to the single solid phases (including F-apatite), differ greatly from the concn. of the same elements in sea water (CaO and F), or they lie between such wide limits (CaO and P_2O_5 for hydroxyapatite) that they can correspond to any possible concn. and origin of sea water. In the investigation of both systems, the salts and CO_2 in all forms found in sea water were not taken into consideration. (3) From the oceanographic factors K. describes in detail the seasonal changes in the sea and the change of the concn. of P, O, CO_2, SiO_2, NO_2 and pH with the depth. The data are inconclusive and require further investigations. (4) From the geol. factors of the formation of phosphate facies and deposits K. notes a no. of regularities obtained from geol. investigations of the phosphate deposits (migration of the facies, their "asymmetry," productivity of the deposits and the quality of phosphorites, parallelism of the isolines and the shore line, etc.) and makes an attempt to restore the hydrological, biol. and, partly, hydrochem. conditions for the formation of the phosphate deposits. The results of analyses support the hypothesis.</p> <p>W. R. Henn</p>
<p>ASH-51A METALLURGICAL LITERATURE CLASSIFICATION</p>	

KAZAKOV, A. V.

168741

USSR/Geology - Phosphate Rocks

Sep/Oct 50

"Geotectonics and Formation of Phosphate Rock Deposits
A. V. Kazakov

"Iz Ak Nauk SSSR, Ser Geol" No 5, pp 42-69

Conclusions on geographic distribution of phosphate rock deposits based on two geologicogenetic regularities. For first time proves and experimentally confirms formation of phosphate rocks as chemical marine deposits from deep ocean waters during transgression on continent. Studies Mesozoic of Russian platform and other areas to show that all phosphate rock deposits of industrial importance are in regions of geotectonic depressions.

168741

KAZAKOV, A.V.

5212

THE FLUORAPATITE SYSTEM OF EQUILIBRIA IN THE
CONDITIONS OF FORMATION OF SEDIMENTARY ROCKS.

A. V. Kazakov. Translated by V. L. Skitsky from Trudy
Inst. Geol. Nauk, Akad. Nauk S.S.S.R. No. 114, Geol. Ser.
No. 40, 1-81(1950). 31p. (TS1-385)

As part of unified research on the behavior of the fluoride
in sedimentary rocks, the present study deals with the
system $\text{CaO}-\text{P}_2\text{O}_5-\text{HF}-\text{H}_2\text{O}$ at 25°C , under conditions of sea
sedimentation. The precipitated phases, their fields of
crystallization and stability, the fluorine-phosphorus
coefficient, and the isomorphism of fluorhydroxyl ions in the
apatite lattice are considered and illustrated by orthogonal
projections. The results lead to conclusions on fluorapatite
sedimentation on phosphate shelves, with its consequent
fixation of fluorine, expressed in the form of an average
annual balance sheet for the processes involved. (V.L.S.)

KAZAKOV, A. V.

8213

CONDITIONS OF THE FORMATION OF FLUORITE IN
SEDIMENTARY ROCKS. (THE FLUORITE SYSTEM).

A. V. Kazakov and E. I. Sokolova. Translated by V. L.
Skitsky from Trudy Inst. Geol. Nauk, Akad. Nauk S.S.S.R.
No. 114, Geol. Ser. No. 40, 22-64(1950), 76p. (TEI-388)

The formation of fluorite in sedimentary rocks has been
investigated by studies of fluorite equilibria in different
solutions. Determinations at different temperatures were
made on the solubility of crystalline CaF_2 in chemically pure
water, in aqueous solutions of components of sea water —
 CaSO_4 , NaCl , Na_2SO_4 , and MgSO_4 — at different concentrations,
and in the sea water itself at degrees of salinity varying
from normal to a 24-fold concentration. Conclusions are
reached on the effects of the various salts and on the con-
sequent possibilities of fluorite precipitation in basins of
different types. Facies conditions of fluorapatite and
fluorite deposition are derived for successive states of
evaporation of saline basins. And the use of the fluorine-
phosphorus coefficient as a facies index is suggested.
Literature is reviewed. (V.L.S.)

Kazakov, A. V.

V. The system ferrous iron-carbon dioxide-water and conclusions as the paragenesis of siderite and phosphorite. A. V. Kazakov, M. M. Tikhomirov, and V. I. Plotnikova. *Trudy Inst. Geol. Nauk Akad. Nauk S.S.S.R.* No. 152, Geol. Ser. No. 64, 59-71 (1967).—The system $\text{FeO-CO}_2\text{-H}_2\text{O}$ at $10 \pm 1^\circ$ was studied; an equil. diagram is drawn. Synthetic spherulitic siderite (FeCO_3) is obtained in a closed O-free system. The siderite system approaches equil. at pH 6.2-7. The oxidation-reduction potential varies from +123.8 to +240. Since the pH values found are substantially lower than during the formation of phosphorites (pH 8-8.5), both cannot be stable or be formed at the same time. The oxidation-reduction potential of the siderite system in natural conditions is also considerably lower (< -10 mv.) than the potential of sea water during phosphorite pptn. (+400 mv.). O is absent in the siderite system but present in sea water. Therefore siderite formation in the phosphorite should be regarded as a diagenetic process resulting from reducing conditions produced by biogenic decay of org. material. A lithologic facies analysis of marls sideritic phosphorite deposits of the Eastern slopes of Ural is given, and the siderite-phosphorite "paragenesis" petrographically is described. These minerals are not syngenetic.

Dist.: 4E4j

Em

KARAKOV, A. V.

Distr. LR2a

Curvature of the system (dolomite, magnesite, and magnesite) by V. Karakov, M. M. Alkhomirov, and V. I. Plomkova. *Trudy Inst. Geol. Nauk Akad. Nauk S.S.S.R.*, No. 157, Geol. Ser. No. 44, 15-18 (1967). An extensive study of the formation of magnesite and dolomite in the systems $MgO-CO_2-H_2O$ and $CaO-MgO-CO_2-H_2O$ at 90° and partly at 60° and 120°. The systems are made more complex by adding other components, such as $NaCl$, $MgSO_4$, gypsum, and other constituents of sea water. For the 20° isotherm, the method used is crystals, not soln. of natural carbonates. Because of high metastability of the system and slow re-establishment of equil., 2 months to a yr. had to be allowed for the pptn. The main effort was to establish conditions for crystals of $MgCO_3$. In the magnesite system, high, medium, and low CO_2 concns. were studied. The nesquehonite ($MgCO_3 \cdot 3H_2O$) field of the field of high CO_2 concns. (2000-19,000 mg./l. CO_2) is studied, the liquid and solid phases being analyzed after pptn. time of 50-350 days at 20°. The authors show that earlier data by Kline (C.A., 23, 4396) who assumed that equil. was reached in 3-5 days are erroneous; 80 to 100 days are necessary. The binary point for nesquehonite lies at considerably higher CO_2 and MgO concns. than is shown on Kline's curve. The paragenesis of brucite and nesquehonite is non-existent, since Kline did not take into account the presence of basic Mg carbonates in the intermediate phase between brucite and nesquehonite. Phys. & specing and differential thermal analysis (DTA) data on nesquehonite, and DTA curves of lansfordite, hydromagnesite and artinite are also given. In the low CO_2 concn. field 0-270 mg./l. CO_2 at 90°, brucite [$Mg(OH)_2$] is stable and artinite starts to ppt. at higher CO_2 concns. The partial pressure of CO_2 above these equil. solns. is $1/2$ of its pressure in the air, which excludes the formation of brucite

KAZAKOVA, A.V., TIKHOMIROVA, N.M., PLOTNIKOVA, V.I.

from open water basins. When air was blown through $Mg(OH)_2$ suspensions, hydromagnesite of the compn. $Mg_3(CO_3)_2(OH)_2 \cdot 4H_2O$ was formed. In the field of medium CO_2 concn. (870-1000 mg./l. CO_2) nesquehonite and basic Mg carbonate are present in the solid phases. Effect of addn. of such sea water components as $MgSO_4$, $NaCl$, and $CaCl_2$ is studied. Nesquehonite and calcite were formed as solid phases. In the 60° isotherm, expts. at 250-6010 mg./l. CO_2 concn. gave mainly hydromagnesite. In one experiment air was blown through a concn. 200 mg./l. CO_2 and 200 mg./l. CO_2 at pH 8 and 9.43 for 20 days. The ppt. contained magnesite rhombohedrons (3-10 μ) and hydromagnesite-like scaly mineral. K. assumes that the expt. represents the lower limit of the magnesite field of the 60° isotherm. In the 150° isotherm, expts. were conducted in ampoules with use of a thermostat. In the closed $MgO-CO_2-H_2O$ system at concn. of 643-2538 mg./l. CO_2 up to 85% of the solids formed were magnesite. Unstable nesquehonite was also formed. In the dolomite system at 100°, the effect of $NaCl$ is found insignificant. No magnesite or dolomite could be obtained. The solid phase consisted of calcite and nesquehonite. A partly open system $CaO-MgO-CO_2-H_2O$ at 60° produced calcite and an arctite mineral at 336 and 310 mg./l. CO_2 concn. The same closed system with less CaO , and at 150° gave magnesite in 14-20 hrs. Increased amt. of CaO in this system produced dolomite in 90 hrs. K. compares the compn. of his magnesite-forming solids with the compn. of the waters of lakes where magnesite or dolomite pptn. have been dis-

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1

2/3

Dist: 482c

Handwritten notes: *Handwritten notes, possibly "KARST" and "PHOSPHORITE"*

covered in lands. K. concludes that controlling factors for magnesite pptn. from sea water are: (1) Relatively high $Mg(HCO_3)_2$ concn.; the total equiv. basicity has to be 6-8 me./l. at 60° but higher at 30°. (2) The cochl. (CO_3 /total equiv. basicity) has to be >2.2. (3) There must be low Ca concn. in water, lower than 60 mg./l. at the end of the process. Formation of dolomite from solns. requires the same conditions but with Ca concn. >80 mg./l. CaO. K. compares the conditions of $MgCO_3$ pptn. with the conditions of flu-hydroxylapatite pptn. from sea water, and concludes that co-pptn. of both compounds is not possible, since the $Mg(HCO_3)_2$ and CO_3 concns. in the sea- and fresh waters, where phosphates are known to be formed, are too low to permit magnesite or dolomite formation. Therefore, the assocn. of phosphorites with dolomite has to be attributed to a later diagenetic and epigenetic deposition of dolomite. Extensive primary deposits of gypsum-anhydrite deposition and should be regarded as neg. signs in prospecting for phosphorites. Many references.

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V. I. Sokolov and A. Z. Valishtein. Trudy Inst. Geol. Nauk S.S.S.R. No. 152, Geol. Ser. No. 64, 72-92 (1937). - A literature review on limonite, goethite, and hydralenite is given, and goethite and lepidocrocite are described. The systems $FeCl_3-KOH-H_2O$ and $Fe(3O)_2-KOH-H_2O$ at 20° are studied. Analyses (28) of liquid and solid phases in the pure chloride system and 12 analyses of the same system with sea water and 34 analyses of the sulfate system phases are given. D-spacing data of the solid phases and graphs indicating pH conditions during the ppns. are included. The soly. of goethite and lepidocrocite is studied. Many references. A. Valishtein

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GILINSKAYA, N.S.; KAZAKOV, A.V.; Prinimala uchastiye ARKHANGEL'SKAYA,
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1. Srednaya shkola No.2 g. Gus'-Khrustal'nyy Vladimirovskoy oblasti.
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KAZAKOV, B. A.

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(OTITIS MEDIA, complications,

*meningitis & sequestration of labyrinth)

(MENINGITIS, complications,

*otitis media & sequestration of labyrinth)

(LABYRINTH, diseases,

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Otogenic sepsis based on material from the otorhinolaryngological
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Vest.oto-rin. 19 no.3:116 My-Je '57.

(MIRA 10:10)

(SEPTICEMIA) (EAR--DISEASES)

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(VINCENT'S INFECTION, transm.
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Otogenic abscesses of the brain and cerebellum. Vest.oto.-rin. 20
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esophageal lesions. Vest.oto-rin.20 no.5:122-124 S-O '58

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(STOMACH, dis.

caustic lesions without esophageal damages (Rus))

(CAUSTICS, inj. eff.

stomach lesions with esophageal damage (Rus))

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Modifitsirovanny polyevoy zhloranalizator. Vyetyerinariya, 1949, No 10, s. 50-52

SO: LETOPIS' No. 34

Translation - "Modified Field Chloring Analyzer"

Antiparasitic effect of the preparation SK-9. B. N. Kazakov (Vet. Acad., Moscow). *Veterinariya* 27, No. 2, 36-7 (1950); *Chem. Zvest.* 1950, 11, 1277.—SK-9 is a chlorinated turpentine. It is a dark brown mass of characteristic odor which is sol. in water in all proportions. In concns. of 0.3-2% it does not kill adult lice but only immobilizes them for 15-30 min. A 0.5% soln. is best for spraying swine. The treatment must be repeated in 10-14 days. Increasing the strength of the soln. does not increase the effectiveness. M. G. Moore

KAZAKOVA, M.V.; KAZAKOV, B.N., Cand. of Vet. Sciences
Moscow Veterinary Academy

"Bronchopneumonia of piglets and its treatment."

SO: Vet. 27 (8) 1950, p. 20

KACAKOV, B. N.; LYUBINOV, V. I. (Vet.)

"Anaphylactic shock in pigs in passive immunization."

SO: Veterinariya 27 (12), 1950, p. 23

KAZAKOV, B.N., Cand. of Vet. Sciences

Moscow Veterinary Academy

"Survival of ticks in pigs treated with the emulsion SK-2."

Sov. Vet. 28 (5) 1951, p. 44

KAZAKOV, B. N. (Cand in Vet Sci)

USSR/Medicine, Veterinary - Immunization Sep 52

"Anaphylactic Shock in Swine Resulting From Passive Immunization," B. N. Kazakov, Cand in Vet Sci, V. I. Lyubimov, Vet Physician, Moscow Vet Acad

"Veterinariya" Vol XXIX, No 9, p 57

Passive immunization of swine, which have never been immunized before, with 20 cc antierysipelas serum injected subcutaneously behind the right ear, produces anaphylaxis. In order to avoid any reaction, the authors recommend that 1 cc of the serum be administered 1st and a full dose of 20 cc be injected 30 min later.

225T26

KAZAKOV, B.N. (Moskva)

Selection of trained personnel is the most important part of organizational work. Sov.zdrav. 14 no.5:3-7 S-O '55(MLB# 8:12)

1. Nachal'nik Upravleniya kadrov Ministerstva zdravookhraneniya RSFSR.

(PUBLIC HEALTH

in Russia, Selection of med.workers)

KAZAKOV, B.M., kandidat veterinarnykh nauk; ZOTOV, V.A., aspirant.

Intramuscular carbon tetrachloride injections in fascioliasis
in sheep. Veterinariia 32 no.8:50-52 Ag '55. (MLRA 8:10)

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